

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|---|--------------------|-------------------|---------------------|---------------------------------------|
| LAKE MICHIGAN | | | | |
| SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69] | | | | |
| | 07/14/10 23:50 CST | 0 | | Marine Thunderstorm Wind (MG 45 kt) |
| | 07/14/10 23:50 CST | 0 | | Source: C-MAN Station |
| PT WASHINGTON TO NORTH PT LT WI COUNTY --- 0.6 N PORT WASHINGTON [43.39, -87.87] | | | | |
| | 07/15/10 00:02 CST | 0 | | Marine Thunderstorm Wind (MG 38 kt) |
| | 07/15/10 00:02 CST | 0 | | Source: C-MAN Station |
| WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81] | | | | |
| | 07/15/10 01:10 CST | 0 | | Marine Thunderstorm Wind (MG 46 kt) |
| | 07/15/10 01:20 CST | 0 | | Source: C-MAN Station |
| Frequent wind gusts 37 to 46 knots in the 10 minute period. | | | | |
| Line of strong to severe thunderstorms swept across eastern Wisconsin and the nearshore waters of Lake Michigan. | | | | |
| WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81] | | | | |
| | 07/15/10 11:10 CST | 0 | | Marine Thunderstorm Wind (MG 38 kt) |
| | 07/15/10 11:20 CST | 0 | | Source: C-MAN Station |
| Frequent gusts to 38 knots in the 10 minute period. | | | | |
| An isolated strong thunderstorm affected the nearshore waters of Lake Michigan south of Wind Point. | | | | |
| SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69] | | | | |
| | 07/15/10 20:10 CST | 0 | | Marine Thunderstorm Wind (MG 41 kt) |
| | 07/15/10 20:10 CST | 0 | | Source: C-MAN Station |
| A line of thunderstorms affected the Lake Michigan nearshore waters producing damaging wind gusts. | | | | |
| WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81] | | | | |
| | 07/22/10 20:40 CST | 0 | | Marine Thunderstorm Wind (MG 48 kt) |
| | 07/22/10 21:00 CST | 0 | | Source: C-MAN Station |
| Frequent wind gusts from 38 knots to 48 knots during the 20 minute period. | | | | |
| Numerous strong to severe thunderstorms affected the nearshore waters of Lake Michigan. | | | | |
| WISCONSIN, Southeast | | | | |
| COLUMBIA COUNTY --- 3.0 SW CAMBRIA [43.52, -89.14], 2.1 ESE CAMBRIA [43.54, -89.06] | | | | |
| | 07/07/10 17:27 CST | 0.10M | | Tornado (EF1, L: 4.23 mi , W: 125 yd) |
| | 07/07/10 17:41 CST | 5K | | Source: NWS Storm Survey |
| An EF1 tornado developed about 2.5 miles southwest of Cambria, about 0.25 miles northeast of the intersection of Old B Road and Welsh Prairie Road, and moved east-northeast to around 2.1 miles east-southeast of Cambria, ending near Fordeg Road just north of Cemetery Road. The tornado moved across a farm where it collapsed the walls of a barn, ripped the fabric off of a shed, moved a fertilizer spreader 300 to 400 feet and pushed a shed door 6 inches. Additionally, 15 acres of corn and 5 acres of wheat were flattened, and numerous trees were uprooted or had branches snapped off. The average path width was 40 yards. The EF1 estimated wind speed of 90 to 95 mph was based on DI 1(SBO) DOD6. The exact start location is Lat 43.52061 Lon -89.14369. The exact end location is Lat 43.53732 Lon -89.06274. | | | | |
| COLUMBIA COUNTY --- 2.5 SW CAMBRIA [43.52, -89.14] | | | | |
| | 07/07/10 17:30 CST | 0 | | Hail (1.25 in) |
| | 07/07/10 17:30 CST | 0 | | Source: Public |

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|----------|-----------|-------------------|---------------------|------------------------|

Scattered strong to severe thunderstorms developed ahead of a surface cold front that was being driven across the western Great Lakes region by the southern end of an upper trough. The front moved into a moist, unstable air mass over southern Wisconsin, with mixed layer CAPE values of 1000 J/kg to 1500 J/kg. Though overall wind shear was marginal...there was sufficient shear to allow a thunderstorm near Cambria in Columbia County to become tornadic.

DODGE COUNTY --- 3.0 W WAUPUN [43.63, -88.79]

| | | |
|--------------------|---|------------------------------|
| 07/10/10 16:00 CST | 0 | Thunderstorm Wind (EG 50 kt) |
| 07/10/10 16:00 CST | 0 | Source: Law Enforcement |

Law enforcement reported power lines down on the Dodge County side of County Highway AW due to thunderstorm wind gusts.

WAUKESHA COUNTY --- MUSKEGO [42.90, -88.13]

| | | |
|--------------------|---|-------------------------|
| 07/10/10 18:01 CST | 0 | Hail (0.75 in) |
| 07/10/10 18:01 CST | 0 | Source: Law Enforcement |

The Muskego Police Department reported 3/4 inch hail fell in the city.

A short wave trough crossing central Wisconsin combined with a moist unstable air mass, where afternoon CAPE values reach 2000 to 3000J/kg, to produce scattered strong to severe thunderstorms over portions of Southeast Wisconsin. Damaging thunderstorm wind gusts and hail up to 3/4 inch in diameter were produced by the thunderstorms.

FOND DU LAC COUNTY --- 3.0 S ROSENDALE [43.76, -88.68]

| | | |
|--------------------|---|-------------------------|
| 07/11/10 15:20 CST | 0 | Funnel Cloud |
| 07/11/10 15:20 CST | 0 | Source: Trained Spotter |

A trained spotter reported a funnel cloud descending from a rotating wall cloud 3 miles south of Rosendale.

GREEN COUNTY --- 7.0 SW BRODHEAD [42.55, -89.47]

| | | |
|--------------------|---|-------------------------|
| 07/12/10 16:13 CST | 0 | Funnel Cloud |
| 07/12/10 16:13 CST | 0 | Source: Trained Spotter |

A trained spotter reported a rotating funnel cloud 7 miles southwest of Brodhead.

Funnel clouds and rotating wall clouds were reported in Fond Du Lac County on July 11th and in Green County on July 12th.

(WI-Z062) IOWA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN

| | | |
|--------------------|---|-----------|
| 07/11/10 22:00 CST | 0 | Dense Fog |
| 07/12/10 07:00 CST | 0 | |

Clearing skies and moist air due to recent rains, combined with light winds and cooling temperatures to produce dense fog over portions of South Central Wisconsin. Visibilities were reduced to 1/4 mile or less from around midnight to 830 am CDT on July 12th.

(WI-Z072) KENOSHA

| | | |
|--------------------|---|-----------|
| 07/13/10 22:00 CST | 0 | Dense Fog |
| 07/14/10 04:00 CST | 0 | |

A combination of clear skies, light winds and abundant near-ground moisture produced dense fog over Kenosha County, beginning during the late night hours of July 13th and lasting into the early morning hours of July 14th. Visibilities were reduced to 1/4 mile or less.

(WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK

| | | |
|--------------------|---|------|
| 07/14/10 16:00 CST | 0 | Heat |
| 07/14/10 16:00 CST | 0 | |

A warm front lifted into far southern Wisconsin, bringing a hot and humid air mass into the region. Temperatures in the 90s and dew points in the 70s produced heat index values between 100 and 104.

FOND DU LAC COUNTY --- 2.0 N RIPON [43.86, -88.83]

| | | |
|--------------------|---|------------------------------|
| 07/14/10 18:30 CST | 0 | Thunderstorm Wind (EG 52 kt) |
| 07/14/10 18:30 CST | 0 | Source: Trained Spotter |

A trained spotter reported trees blown down by thunderstorm wind gusts estimated at 52 knots (60 mph).

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| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|--|--------------------|-------------------|---------------------|---------------------------------|
| SAUK COUNTY --- 2.0 NW LAKE DELTON [43.60, -89.81] | | | | |
| | 07/14/10 18:33 CST | | 0 | Thunderstorm Wind (EG 50 kt) |
| | 07/14/10 18:33 CST | | 0 | Source: Public |
| The public reported a thunderstorm wind gust estimates at 50 knots (58 mph). | | | | |
| DODGE COUNTY --- 2.0 NW FOX LAKE [43.59, -88.93] | | | | |
| | 07/14/10 19:05 CST | | 0 | Thunderstorm Wind (EG 52 kt) |
| | 07/14/10 19:05 CST | | 0 | Source: Public |
| The public reported a thunderstorm wind gust estimated at 60 mph (52 knots). | | | | |
| SHEBOYGAN COUNTY --- 5.0 W CASCADE [43.67, -88.10] | | | | |
| | 07/14/10 19:42 CST | | 0 | Thunderstorm Wind (EG 52 kt) |
| | 07/14/10 19:42 CST | | 0 | Source: Public |
| The public reported trees blown down by thunderstorm wind gusts estimated at 52 knots (60 mph). | | | | |
| WASHINGTON COUNTY --- HARTFORD [43.32, -88.38] | | | | |
| | 07/14/10 19:53 CST | | 10K | Thunderstorm Wind (EG 52 kt) |
| | 07/14/10 19:53 CST | | 0 | Source: Emergency Manager |
| The emergency manager of Washington County reported trees and power lines blown down by thunderstorm wind gusts in Hartford and a few other locations in the county. | | | | |
| COLUMBIA COUNTY --- WISCONSIN DELLS [43.63, -89.77], PORTAGE [43.55, -89.45] | | | | |
| | 07/14/10 22:00 CST | | 20K | Thunderstorm Wind (EG 61 kt) |
| | 07/14/10 22:18 CST | | 0 | Source: Trained Spotter |
| A trained spotter reported trees and power lines blown down by thunderstorm wind gusts estimated at 70 mph (61 knots) along a path from the Wisconsin Dells to Portage. | | | | |
| MARQUETTE COUNTY --- 2.5 NNE BRIGGSVILLE [43.68, -89.56] | | | | |
| | 07/14/10 22:02 CST | | 0 | Thunderstorm Wind (EG 52 kt) |
| | 07/14/10 22:02 CST | | 0 | Source: Fire Department/Rescue |
| Fire department personnel reported thunderstorm wind gusts up to an estimated 52 knots (60 mph). | | | | |
| COLUMBIA COUNTY --- 10.0 W COLUMBUS [43.33, -89.22] | | | | |
| | 07/14/10 22:40 CST | | 0 | Thunderstorm Wind (EG 56 kt) |
| | 07/14/10 22:40 CST | | 0 | Source: Law Enforcement |
| Law enforcement personnel reported trees blown down by thunderstorm wind gusts estimated at 56 knots (65 mph). | | | | |
| SAUK COUNTY --- 2.0 N ROCK SPGS [43.51, -89.92], 2.0 NE BARABOO [43.49, -89.70], 2.0 SE BARABOO [43.45, -89.70], 2.0 SW ROCK SPGS [43.46, -89.95] | | | | |
| | 07/14/10 22:45 CST | | 30K | Flash Flood (due to Heavy Rain) |
| | 07/15/10 01:30 CST | | 10K | Source: Emergency Manager |
| The Sauk County Emergency Manager reported one to three feet of water over some roads, mainly in the northern portion of the county...with sandbagging operations in Rock Springs along the rapidly rising Baraboo River. A trained spotter reported street flooding along Highway 33 in Baraboo. The flooding was the result of heavy rains from strong to severe thunderstorms crossing the region. A farmer near La Valle lost 30 head of cattle that drowned when they left high ground into the rushing waters of the Little Baraboo River. Minor crop damage was also noted. | | | | |
| DODGE COUNTY --- FOX LAKE [43.57, -88.90] | | | | |
| | 07/14/10 22:50 CST | | 5K | Thunderstorm Wind (EG 65 kt) |
| | 07/14/10 23:00 CST | | 0 | Source: Law Enforcement |
| Law enforcement officials reported trees and power poles blown down by thunderstorm wind gusts estimated at 65 knots (75 mph). | | | | |
| DODGE COUNTY --- 1.0 NE BEAVER DAM [43.48, -88.82] | | | | |

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|----------|--------------------|-------------------|---------------------|------------------------------|
| | 07/14/10 22:58 CST | | 0 | Thunderstorm Wind (EG 52 kt) |
| | 07/14/10 22:58 CST | | 0 | Source: Trained Spotter |

A trained spotter estimated thunderstorm wind gusts up to 52 knots (60 mph).

SAUK COUNTY --- 7.0 W LA VALLE [43.58, -90.27]

| | | |
|--------------------|---|------------------------------|
| 07/14/10 23:00 CST | 0 | Thunderstorm Wind (EG 56 kt) |
| 07/14/10 23:00 CST | 0 | Source: Public |

The public reported trees blown down by thunderstorm wind gusts estimated up to 56 knots (70 mph).

WASHINGTON COUNTY --- 3.4 SW WEST BEND [43.38, -88.23]

| | | |
|--------------------|-----|--------------------------------|
| 07/14/10 23:20 CST | 20K | Lightning |
| 07/14/10 23:30 CST | 0 | Source: Fire Department/Rescue |

The West Bend Fire Department responded to four calls for trees on fire due to lightning strikes and power line damage due to lightning strikes, including near the intersection of CTH NN and Scenic Rd. in West Bend.

DODGE COUNTY --- MAYVILLE [43.50, -88.55]

| | | |
|--------------------|----|------------------------------|
| 07/14/10 23:22 CST | 1K | Thunderstorm Wind (EG 65 kt) |
| 07/14/10 23:22 CST | 0 | Source: Law Enforcement |

Law enforcement reported a power pole snapped by strong thunderstorm wind gusts estimated up to 65 knots (75 mph).

SHEBOYGAN COUNTY --- 2.0 W GREENBUSH [43.78, -88.12]

| | | |
|--------------------|---|------------------------------|
| 07/14/10 23:30 CST | 0 | Thunderstorm Wind (EG 52 kt) |
| 07/14/10 23:30 CST | 0 | Source: Law Enforcement |

Law enforcement officials reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

WASHINGTON COUNTY --- 5.0 N SLINGER [43.40, -88.28]

| | | |
|--------------------|---|------------------------------|
| 07/14/10 23:40 CST | 0 | Thunderstorm Wind (EG 52 kt) |
| 07/14/10 23:40 CST | 0 | Source: Law Enforcement |

Law enforcement officials reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

WAUKESHA COUNTY --- 2.0 NE LANNON [43.17, -88.14]

| | | |
|--------------------|---|------------------------------|
| 07/14/10 23:55 CST | 0 | Thunderstorm Wind (EG 52 kt) |
| 07/14/10 23:55 CST | 0 | Source: Public |

The public reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

OZAUCKEE COUNTY --- 3.0 SW SAUKVILLE [43.35, -87.97]

| | | |
|--------------------|---|------------------------------|
| 07/15/10 00:00 CST | 0 | Thunderstorm Wind (EG 52 kt) |
| 07/15/10 00:00 CST | 0 | Source: Law Enforcement |

Law enforcement officials reported trees blown down by thunderstorm wind gusts estimated up to 52 knots (60 mph).

MILWAUKEE COUNTY --- 8.0 N MILWAUKEE INTERNATIONAL AIRPORT [43.06, -87.90], 1.6 SE BUTLER [43.06, -88.05], 2.7 SSW STATE FAIR PARK [42.99, -88.04], 1.3 SW MILWAUKEE SOUTH SHORE PARK [42.98, -87.90]

| | | |
|--------------------|-----|---------------------------------|
| 07/15/10 00:45 CST | 10K | Flash Flood (due to Heavy Rain) |
| 07/15/10 03:30 CST | 0 | Source: Law Enforcement |

Heavy rain from strong to severe thunderstorms produced 3 to 4 inch rainfall amounts in only a couple of hours. Flash flooding from the heavy rain flooded basements in West Allis; blocked the east-bound lanes of Greenfield Avenue between 116th St. and 124th St.; blocked 82nd St. and 83rd St. near Orchard St. with two to three feet of water over the roads that stalled cars; made I-794 at the south end of the Hoan Bridge impassable due to high water over the roadway; and quickly filled the 2500 block of N. Humboldt Ave. with 2 feet of water.

WAUKESHA COUNTY --- 1.5 NE ELM GROVE [43.06, -88.06], 1.7 ESE PEWAUKEE [43.07, -88.24], 2.1 ENE BETHESDA [42.99, -88.24], 1.1 ESE PROSPECT [42.95, -88.13], 3.5 ENE NEW BERLIN [43.00, -88.05]

| | | |
|--------------------|----|---------------------------------|
| 07/15/10 00:45 CST | 5K | Flash Flood (due to Heavy Rain) |
| 07/15/10 03:30 CST | 0 | Source: Law Enforcement |

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|--|--------------------|-------------------|---------------------|--------------------------------------|
| Heavy rain from strong to severe thunderstorms that moved across the region produced flash flooding from 3 to 4-inch rainfall that fell in only a couple of hours. All of the I-94 ramps in Brookfield were closed for a time due to high water. Water covered Sunset Drive at a railroad intersection about 1 mile southwest of Waukesha. Trained spotters reported 2 feet of water flowing through the intersection of Calhoun Rd and Beloit Rd., as well as Overland Trail near Brookfield Rd. in New Berlin. | | | | |
| COLUMBIA COUNTY --- 2.0 NW LODI [43.34, -89.55], DEKORRA [43.47, -89.47], 2.0 NNW POYNETTE [43.43, -89.42], LODI [43.32, -89.52] | | | | |
| | 07/15/10 01:00 CST | | 60K | Flash Flood (due to Heavy Rain) |
| | 07/15/10 03:00 CST | | 10K | Source: Emergency Manager |
| The Columbia County Emergency Manager reported gravel shoulder wash-outs on several roads and one to two feet of water on low-lying roads from heavy rains as strong to severe thunderstorms crossed the region. Minor crop damage was also noted. | | | | |
| A continuous feed of moisture, in a low to mid-level warm air advection regime, impinged along an outflow boundary draped across southern Wisconsin. This set-up fueled thunderstorms that developed, and redeveloped, along the boundary from the evening of July 14th into the early morning hours of July 15th. Flash flooding occurred in the hills of the Wisconsin River Valley, and in the urban areas of Waukesha and Milwaukee counties, where more than 4 inches of rain fell from the evening into the overnight hours. | | | | |
| KENOSHA COUNTY --- KENOSHA AIRPORT [42.60, -87.93] | | | | |
| | 07/15/10 16:59 CST | | 0 | Thunderstorm Wind (MG 50 kt) |
| | 07/15/10 16:59 CST | | 0 | Source: ASOS |
| KENOSHA COUNTY --- 0.5 SSE KENOSHA AIRPORT [42.59, -87.93], 2.6 WNW DOWNTOWN KENOSHA [42.60, -87.88] | | | | |
| | 07/15/10 17:10 CST | | 50K | Thunderstorm Wind (EG 52 kt) |
| | 07/15/10 17:15 CST | | 0 | Source: Trained Spotter |
| A severe thunderstorm moved east from near Kenosha Airport, where a small plane was damaged, across western and southern portions of the city of Kenosha. Sporadic damage was reported as the damaging thunderstorm wind gusts fanned out along and either side of a line from the airport to near the intersection of 56th Avenue and 42nd Street. Power poles were snapped and a transformer exploded knocking out power to about 5000 customers. Ten to twelve-inch tree limbs were broken and trees were felled by the powerful winds. A portion of the roof of the Oemmmco building was blown off. | | | | |
| A cold front, trailing from low pressure to the north of Wisconsin, was draped across far Southeast Wisconsin around midday on July 15th. A thunderstorm rapidly developed along the front in western Kenosha County, and became severe as it swept across eastern sections of the county before moving out over Lake Michigan. | | | | |
| RACINE COUNTY --- 1.6 ESE BROWNS LAKE [42.66, -88.20], 1.1 E DOWNTOWN RACINE [42.72, -87.78] | | | | |
| | 07/18/10 10:00 CST | | 25K | Thunderstorm Wind (EG 52 kt) |
| | 07/18/10 10:40 CST | 1 | 0 | Source: Newspaper |
| A thunderstorm developed southeast of Burlington and rapidly strengthened as it moved east-northeast across the city of Racine. Numerous trees and power lines were blown down by the thunderstorm wind gusts, mainly on the west side of the city. About 1,000 WE electric customers were without power at the height of the storm. A spectator at the Racine Triathlon at the lakefront sustained a minor injury when struck by a tent that blew over in the winds. | | | | |
| SHEBOYGAN COUNTY --- 0.8 N HOWARDS GROVE [43.84, -87.82], 0.7 SSW HAVEN [43.84, -87.76] | | | | |
| | 07/18/10 14:21 CST | | 5K | Tornado (EF0, L: 3.31 mi , W: 50 yd) |
| | 07/18/10 14:28 CST | | 0 | Source: NWS Storm Survey |
| A rapidly developing thunderstorm produced an EF0 tornado that began about 0.6 miles north-northwest of the town of Howards Grove, on Tyler Road, just north of Roosevelt Road and west of STH 42, and ended 0.5 miles south-southwest of the town of Haven, about 0.5 miles north-northeast of the intersection of Rowe Road and Dairyland Drive. The tornado snapped tree branches at sporadic locations along the path, which averaged 25 yards in width with a maximum width of 50 yards, and overturned and damaged an SUV and an attached trailer on I-43. The EF0 wind speed was estimated at 75-80 mph based on DI 27(TH), DOD2. The exact start location is Lat 43.841972 and Lon -87.822667. The exact end location is Lat 43.84111 and Lon -87.75621. | | | | |
| A surface low pressure and associated cold front moved across southern Wisconsin triggering isolated thunderstorms during the morning and afternoon on July 18th. There was sufficient wind shear for one of the storms to produce a tornado in Sheboygan County...with a severe thunderstorm in Racine County producing 60 mph wind gusts that damaged trees and dropped power lines in the city of Racine. Ten trees were felled in Holy Cross cemetery that damaged many headstones. | | | | |
| SAUK COUNTY --- HILLPT [43.42, -90.12], LIMERIDGE [43.47, -90.15], 3.0 SW REEDSBURG [43.50, -90.04], 2.0 W ROCK SPGS [43.48, -89.96] | | | | |
| | 07/19/10 17:45 CST | | 0 | Flash Flood (due to Heavy Rain) |
| | 07/19/10 21:00 CST | | 0 | Source: Law Enforcement |
| Slow-moving thunderstorms produced 3 inches of rain in a short amount of time. Several roads were closed, including Herritz Road at CTH F and CTH S at Narrows Valley Road due to high water making the roads impassable. | | | | |

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| <p>A pocket of slow-moving thunderstorms produced 3 inches of rain in less than 2 hours over hilly terrain in central Sauk County. Roads made impassable due to high water were closed by law enforcement officials .</p> | | | | |
| (WI-Z056) SAUK | | | | |
| | 07/19/10 23:00 CST | | 0 | Dense Fog |
| | 07/20/10 04:00 CST | | 0 | |
| <p>A combination of clear skies, light winds and abundant near-ground moisture produced dense fog over Sauk County, and northern sections of Iowa County beginning during the late night hours of July 19th and lasting into the early morning hours of July 20th. Visibilities were reduced to 1/4 mile or less.</p> | | | | |
| DANE COUNTY --- 1.6 NW DANE [43.27, -89.52], 1.0 NNE DANE [43.26, -89.49] | | | | |
| | 07/22/10 15:08 CST | | 1K | Tornado (EF1, L: 1.53 mi , W: 30 yd) |
| | 07/22/10 15:10 CST | | 0.10K | Source: Public |
| <p>A National Weather Service survey team confirmed a public report of a tornado near the village of Dane. The EF1 tornado developed just west of STH 113, a little north of the intersection with Reppen Road, and moved east-southeast before dissipating near the intersection of Lee Road and County Road Dam. The tornado caused minor crop damage to a corn field, uprooted trees and snapped large branches, as well as brought a power line down along the path, which averaged 20 yards in width. The EF1 estimated wind speed of 90 mph was based on DI 27 (TH), DOD3. The exact start location is Lat. 43.26637 Lon. -89.52248. The exact end location is Lat 43.26337 Lon -89.49240.</p> | | | | |
| DODGE COUNTY --- NEOSHO [43.32, -88.52] | | | | |
| | 07/22/10 15:09 CST | | 0 | Funnel Cloud |
| | 07/22/10 15:09 CST | | 0 | Source: Law Enforcement |
| DANE COUNTY --- 2.9 N YORK CENTER [43.27, -89.07], 4.1 NE YORK CENTER [43.27, -89.01] | | | | |
| | 07/22/10 15:24 CST | | 0 | Tornado (EF0, L: 3.00 mi , W: 30 yd) |
| | 07/22/10 15:30 CST | | 1K | Source: NWS Storm Survey |
| <p>An EF0 tornado developed about 5.6 miles east of Bristol, near STH 73 just north of CTH V and moved east-southeast before dissipating just south of the intersection of Kasper Road and Tri-County Road. Sporadic damage to tree limbs and some corn was pushed down, but no structural damage was noted along the path, which averaged 20 yards. The EF-rating was based on DI 27 (TH), DOD2 which suggests maximum winds were around 65 mph. The exact start location is Lat 43.271694 and Lon -89.068583. The exact end location is Lat 43.269639 and Lon -89.008972.</p> | | | | |
| DODGE COUNTY --- 3.0 W LOWELL [43.33, -88.86] | | | | |
| | 07/22/10 15:35 CST | | 0 | Funnel Cloud |
| | 07/22/10 15:35 CST | | 0 | Source: Trained Spotter |
| DANE COUNTY --- 1.0 E STOUGHTON [42.92, -89.20] | | | | |
| | 07/22/10 15:46 CST | | 0 | Funnel Cloud |
| | 07/22/10 15:46 CST | | 0 | Source: Law Enforcement |
| MILWAUKEE COUNTY --- 4.0 W BROWN DEER [43.17, -88.05] | | | | |
| | 07/22/10 16:06 CST | | 0 | Thunderstorm Wind (MG 53 kt) |
| | 07/22/10 16:06 CST | | 0 | Source: Trained Spotter |
| <p>A trained spotter measured a thunderstorm wind gust at 61 mph (53 knots) 4 miles west of Brown Deer. The wind gusts snapped small trees, with trunks about 6 inches in diameter.</p> | | | | |
| JEFFERSON COUNTY --- 3.5 SSW WATERLOO [43.14, -89.01], 2.1 NW HOOPERS [43.12, -88.90] | | | | |
| | 07/22/10 16:10 CST | | 0 | Tornado (EF0, L: 5.74 mi , W: 30 yd) |
| | 07/22/10 16:18 CST | | 0 | Source: NWS Storm Survey |
| <p>An EF0 tornado began about 3.5 miles southwest of Waterloo on Veith Road, about a mile west of the intersection of Velth Road and CTH O. The tornado moved east-southeast before dissipating just east of STH 89, about 2 miles north of the interchange of STH 89 and I-94. Damage was mostly to trees along an intermittent path, which averaged 20 yards in width. No structural damage was found. The EF-rating was based on DI 27 (TH) DOD2 which suggests maximum winds speeds of 65 mph. The exact start location is Lat 43.135917 and Lon -89.013528. The exact end location is 43.120889 and Lon -88.901667.</p> | | | | |
| SHEBOYGAN COUNTY --- 0.5 WSW PLYMOUTH [43.75, -87.99] | | | | |
| | 07/22/10 16:10 CST | | 10K | Lightning |
| | 07/22/10 16:10 CST | | 0 | Source: Newspaper |

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|--|--------------------|-------------------|---------------------|--------------------------------------|
| A lightning strike to a power pole near Plymouth destroyed insulators and damaged wire conductors, knocking out power to about 500 customers. Power was off to these customers for around 45 minutes. | | | | |
| JEFFERSON COUNTY --- 3.0 S WATERLOO [43.14, -88.98] | | | | |
| | 07/22/10 16:16 CST | | 0 | Funnel Cloud |
| | 07/22/10 16:16 CST | | 0 | Source: Trained Spotter |
| JEFFERSON COUNTY --- 1.9 SE FARMINGTON [43.06, -88.65] | | | | |
| | 07/22/10 16:35 CST | | 0 | Tornado (EF0, L: 0.10 mi , W: 30 yd) |
| | 07/22/10 16:36 CST | | 0 | Source: Trained Spotter |
| A trained spotter saw a brief tornado in a swampy marsh about 1.75 miles southeast of Farmington, about 1/2 mile west of Hillside Drive. The spotter observed a swirling, wispy, water-like spray. Little movement was noted by the spotter before the tornado dissipated. The tornado was given an estimated rating of EF0 with a maximum wind speed of 65 mph. The exact location is Lat 43.05803 and Lon -88.64837. | | | | |
| DANE COUNTY --- 1.3 NNE HANERVILLE [42.89, -89.16], 0.6 WSW ALBION [42.88, -89.08] | | | | |
| | 07/22/10 17:02 CST | | 20K | Tornado (EF1, L: 4.18 mi , W: 75 yd) |
| | 07/22/10 17:10 CST | | 6K | Source: NWS Storm Survey |
| An EF1 tornado developed about 4.6 miles west-northwest of Albion, about 1/4 mile north of the intersection of Velum Rd. and Leslie Rd., and continued east-southeast about 4 miles before dissipating just north of Bliven Rd around 1 mile east of CTH X near the Jana Airport. The tornado partially uprooted trees, broke large branches, damaged a barn and damaged corn along the path that averaged 45 yards. The maximum path width was 75 yards. The EF1 estimated wind speed of 90 mph was based on DI 27(TH) DOD3. The exact start point is Lat 42.88826 and Lon -89.16181. The exact end point is Lat 42.87732 and Lon 89.08052. | | | | |
| WAUKESHA COUNTY --- 2.0 N DOWNTOWN WAUKESHA [43.05, -88.22] | | | | |
| | 07/22/10 17:13 CST | | 0 | Thunderstorm Wind (MG 59 kt) |
| | 07/22/10 17:13 CST | | 0 | Source: Amateur Radio |
| JEFFERSON COUNTY --- 2.4 SSE LAKE KOSHKONONG [42.85, -88.92], 3.9 ESE LAKE KOSHKONONG [42.85, -88.86] | | | | |
| | 07/22/10 17:22 CST | | 0 | Tornado (EF0, L: 2.77 mi , W: 75 yd) |
| | 07/22/10 17:32 CST | | 0 | Source: Trained Spotter |
| An EF0 tornado developed near the intersection of STH 26 and Rock-Jefferson County Line Rd., about 6.6 miles southwest of Fort Atkinson. The tornado damaged tree limbs along the roughly 2.75 mile path that averaged 40 yards in width. The tornado dissipated about 5.3 miles south of Fort Atkinson, just south of the intersection of Poeppel Rd. and Grogan Rd. The EF0 estimated winds of 75-80 mph were based on DI 27(TH) DOD2. The exact start location is Lat 42.84620 and Lon -88.91638. The exact end location is Lat 42.85381 and Lon -88.86265. | | | | |
| MILWAUKEE COUNTY --- 0.2 NE WEST MILWAUKEE [43.02, -87.95] | | | | |
| | 07/22/10 17:30 CST | | 0 | Lightning |
| | 07/22/10 17:30 CST | 2 | 0 | Source: Newspaper |
| Two sisters, 25 years old and 30 years old, attempting to run home from a nearby sandwich shop, were injured when struck by lightning. They were taken to a nearby hospital and admitted for treatment of their injuries. | | | | |
| WALWORTH COUNTY --- 0.8 SSE TROY CENTER [42.81, -88.46] | | | | |
| | 07/22/10 17:31 CST | | 0 | Funnel Cloud |
| | 07/22/10 17:31 CST | | 0 | Source: Fire Department/Rescue |
| WAUKESHA COUNTY --- 2.0 SSE EAGLE [42.85, -88.45] | | | | |
| | 07/22/10 17:35 CST | | 0 | Funnel Cloud |
| | 07/22/10 17:35 CST | | 0 | Source: Trained Spotter |
| JEFFERSON COUNTY --- 1.8 SW COLD SPG [42.86, -88.80], 1.8 N WHITEWATER [42.85, -88.72] | | | | |
| | 07/22/10 17:38 CST | | 0 | Tornado (EF0, L: 3.90 mi , W: 75 yd) |
| | 07/22/10 17:45 CST | | 0 | Source: NWS Storm Survey |
| An EF0 tornado developed about 2.7 miles southwest of Cold Spring, just northwest of the intersection of U.S. Highway 12 and Hoge Rd. The tornado moved east for around 4 miles, ending about 1.6 miles north-northeast of Whitewater, 1/4 mile west of the intersection of STH 59 and CTH D. Damage was limited to large tree branches along the path, which averaged 45 yards. The EF0 estimated wind speed of 65 to 70 mph was based on DI 27(TH) DOD2. The exact start location is Lat 42.85819 and Lon -88.80070. The exact end location is Lat 42.85497 and Lon -88.72386. | | | | |

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|--|--------------------|-------------------|---------------------|---------------------------------------|
| DANE COUNTY --- 1.7 S MT HOREB [42.98, -89.73], 2.0 SE MT HOREB [42.98, -89.70] | | | | |
| | 07/22/10 17:52 CST | | 5K | Tornado (EF1, L: 1.46 mi , W: 75 yd) |
| | 07/22/10 17:55 CST | | 0 | Source: NWS Storm Survey |
| An EF1 tornado developed about 2 miles south of Mt. Horeb, just east of CTH JG about 1/4 mile east of the intersection of Sand Rock Rd. and Barton Rd. The tornado caused minor home damage, knocked trees down and broke tree limbs, uplifted patio pavers, and tumbled a farm wagon along a 1.5 mile path that averaged 50 yards in width. The tornado ended about 2.5 miles southeast of Mt. Horeb, just east of STH 92, about 1 mile north of the intersection of STH 92 and Malone Rd. The EF1 estimated wind speeds of 95 to 100 mph were based on DI 2(FR12) DOD4. The exact start location is Lat 42.97497 and Lon -89.72878. The exact end location is Lat 42.97961 and Lon -89.70055. | | | | |
| WAUKESHA COUNTY --- 1.1 S BIG BEND [42.86, -88.20], 1.4 SE BIG BEND [42.87, -88.18] | | | | |
| | 07/22/10 18:02 CST | | 75K | Tornado (EF2, L: 1.00 mi , W: 100 yd) |
| | 07/22/10 18:05 CST | | 3K | Source: NWS Storm Survey |
| An EF2 tornado developed about 1 mile south of Big Bend, 1/8 mile west of of STH 164 between Henneberry Ave. and Kelsey Ave. The tornado partially uprooted trees, broke tree branches, caused corn crop damage and destroyed a garage and pole shed along a 1 mile path that averaged 70 yards in width. Additionally, it flipped over a camping trailer and carried a tool box about 1/2 mile away. The tornado ended about 1.7 miles southeast of Big Bend, 1/3 mile east-northeast of the intersection of Crowbar Dr. and Parker Dr. The EF2 estimated wind speeds of 115 to 120 mph were based on DI 27(TH) DOD4. The exact start location is Lat 42.86466 and Lon -88.20040. The exact end location is Lat 42.86569 and Lon -88.18079. | | | | |
| DANE COUNTY --- 0.2 SW VERONA ARPT [42.98, -89.52], 0.1 E VERONA ARPT [42.98, -89.52] | | | | |
| | 07/22/10 18:10 CST | | 0 | Tornado (EF0, L: 0.22 mi , W: 30 yd) |
| | 07/22/10 18:11 CST | | 0 | Source: NWS Storm Survey |
| A brief EF0 tornado developed about 1 mile southeast of Verona, just southeast of the intersection of Harvest Ln. and Whalen Rd. The tornado caused minor tree limb damage around Whalen Rd., but no structural damage was noted. The short 0.22 mile path averaged about 15 yards in width. The tornado ended just northeast of the intersection of Whalen Rd. and Gatsby Glenn Dr. The EF0 estimated wind speeds of 65 to 70 mph were based on DI 27(TH) DOD1. The exact start location is Lat 42.97827 and Lon -89.52267. The exact end location is Lat 42.98007 and Lon -89.51900. | | | | |
| MILWAUKEE COUNTY --- 1.0 ESE OAKWOOD [42.84, -87.91], 1.0 WSW RAWSON [42.85, -87.90] | | | | |
| | 07/22/10 18:55 CST | | 2K | Thunderstorm Wind (EG 65 kt) |
| | 07/22/10 18:57 CST | | 0 | Source: Trained Spotter |
| A wet microburst with estimated wind gusts to 75 mph pushed a 25-foot camping trailer several feet, resulting in minor damage. Additionally, a flag-pole was snapped at its base, and several large trees sustained damage to large limbs or trunks. | | | | |
| GREEN COUNTY --- 1.1 SSW MONROE [42.59, -89.64] | | | | |
| | 07/22/10 19:30 CST | | 15K | Lightning |
| | 07/22/10 19:30 CST | | 0 | Source: Broadcast Media |
| A lightning strike to a tree killed 8 cows that had gathered under the tree seeking shelter from a thunderstorm. The value of the cows was between \$12,000 and \$16,000. | | | | |
| WALWORTH COUNTY --- WHITEWATER [42.83, -88.73] | | | | |
| | 07/22/10 19:32 CST | | 0 | Thunderstorm Wind (EG 52 kt) |
| | 07/22/10 19:40 CST | | 0 | Source: Trained Spotter |
| A trained spotter estimated thunderstorm wind gusts up to 52 knots (60 mph) that lasted for eight minutes. | | | | |
| A stalled frontal boundary combined with a moist and unstable atmosphere and strong wind shear to produce numerous tornadoes and funnel clouds over South Central and Southeast Wisconsin. A series of vorticity maxima moving west to east through the western Great Lakes enhanced isentropic lift, as a strengthening southerly low-level jet interacted with a nearly stationary west to east warm front. | | | | |

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|
|----------|-----------|-------------------|---------------------|------------------------|



This map shows the location, EF rating and the path length of each of the 10 tornadoes that occurred in the late afternoon and evening hours of July 22nd. In addition, the core of the damage path caused by thunderstorm wind gusts of 85 to 90 mph in Walworth County between Whitewater Lake and Sugar Creek is also shown.

COLUMBIA COUNTY --- 3.5 WSW PORTAGE ARPT [43.55, -89.54], 3.4 ESE FRIESLAND [43.56, -89.01], 3.6 S COLUMBUS [43.28, -89.03], 3.1 SSW OKEE [43.31, -89.60]

| | | |
|--------------------|-------|---------------------------------|
| 07/22/10 16:00 CST | 0.10M | Flash Flood (due to Heavy Rain) |
| 07/22/10 19:00 CST | 10K | Source: Law Enforcement |

Law enforcement officials reported numerous road closures and culverts damaged due to deep and rushing water over roads from near Portage to Randolph, and south to the Dane County border. Included in these reports was damage to culvert supports in the Harmony Grove subdivision and damage to roads shoulders and driveways along Cactus Acres Road in Lodi; knee-high water covering Henry Drive in Portage. Storm total rainfall reports include 3.68 inches in Lodi; 3.58 inches in Arlington; and 2.58 inches near the Wisconsin Dells, with much of the rain falling within one to two hours of time.

DANE COUNTY --- 0.8 N STONE [42.88, -89.30], 4.2 NNE PRIMROSE [42.95, -89.63], 4.0 E ROXBURY [43.26, -89.59], 1.6 NW YORK CENTER [43.25, -89.09]

| | | |
|--------------------|-------|---------------------------------|
| 07/22/10 16:00 CST | 0.10M | Flash Flood (due to Heavy Rain) |
| 07/22/10 20:00 CST | 10K | Source: Trained Spotter |

Training thunderstorms produced 2.5 to 4.5 inches of rain in about two hours over mainly the northern half of the county. Street flooding stranded cars in Sun Prairie, various locations in the city of Madison, Oregon, Middleton and DeForest. Three to four feet of water covered the intersection of Commercial Avenue and Ckronke Road in Sun Prairie, stalling cars and filling some home basements and commercial buildings with water, that damaged contents.

DODGE COUNTY --- RANDOLPH [43.53, -89.00], 1.3 WNW PORTLAND [43.21, -88.99], 1.2 ENE ALDERLEY [43.22, -88.43], 1.3 ENE HERMAN CENTER [43.43, -88.45]

| | | |
|--------------------|-----|---------------------------------|
| 07/22/10 16:00 CST | 20K | Flash Flood (due to Heavy Rain) |
| 07/22/10 19:00 CST | 5K | Source: Emergency Manager |

Emergency managers reported numerous road closures due to flash flooding in the southern half of the county. Included in the reports were washed out shoulders along roads in the Reeseville and Lowell areas. Law enforcement officials reported street flooding at the intersection of Mill Street and Grant Street, and along Maple Avenue in Beaver Dam made the streets impassable. A trained spotter reported 1.5 to 2 feet of water over the road at the intersection of CTH DJ and CTH E about 3.5 miles southeast of Clyman. Storm total rainfall reports include 3.42 inches at Hustisford; 3.24 inches in Juneau; 2.40 inches in Beaver Dam; and 2.36 in Horicon, with much of the rain falling within one to two hours of time.

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|--|--------------------|-------------------|---------------------|---------------------------------|
| SHEBOYGAN COUNTY --- 1.6 WSW SHEBOYGAN [43.74, -87.75], 2.5 NNW KOHLER ANDRAE STATE PARK [43.70, -87.72], 2.2 NE ST GEORGE [43.69, -87.75], 1.0 SSE KOHLER [43.72, -87.77] | | | | |
| | 07/22/10 16:30 CST | | 20K | Flash Flood (due to Heavy Rain) |
| | 07/22/10 19:00 CST | | 2K | Source: Trained Spotter |
| A trained spotter reported 3 feet of water over South Business Drive between Riverdale Avenue and Stahl Road in the town of Wilson 5 miles south-southwest of Sheboygan. Another trained spotter reported street flooding on the south side of the city of Sheboygan near the intersection of Weeden Creek road and 10th Street. The flooding damaged the contents of flooded basements and washed out gravel shoulders of roads. | | | | |
| WASHINGTON COUNTY --- 0.7 SE ST KILIAN [43.54, -88.36], 1.7 E MICHAELS [43.52, -88.14], 1.9 S WEST BEND ARPT [43.39, -88.13], 1.9 NNE SLINGER [43.36, -88.27] | | | | |
| | 07/22/10 16:30 CST | | 20K | Flash Flood (due to Heavy Rain) |
| | 07/22/10 19:00 CST | | 2K | Source: Law Enforcement |
| Police officials closed Clinton Street just west of U.S. Highway 45 in Kewaskum due to flooding. Sandbagging operations were needed on Little Cedar Lake due to rapidly rising lake levels from the heavy rain. Street flooding was reported in West Bend with a trained spotter in town recording 1.77 inches of rain that fell in 25 minutes. A trained spotter in the Barton area about 1.5 miles north of West Bend reported significant flooding on area roads and 6 inches or more of standing water covering the yards of residences in his neighborhood. The floodwater damaged the contents of flooded basements in the area. He recorded 2.03 inches of rain in about 45 minutes. Storm total rainfall amounts include 4.60 inches in Richfield; 4.51 inches at Holy Hill; and Germantown 3.13 inches. | | | | |
| DANE COUNTY --- DANE [43.25, -89.50], DE FOREST [43.25, -89.33], OREGON [42.93, -89.38], 2.8 SE RILEY [42.99, -89.59] | | | | |
| | 07/22/10 17:00 CST | | 0.15M | Flash Flood (due to Heavy Rain) |
| | 07/22/10 20:00 CST | | 10K | Source: Trained Spotter |
| Training thunderstorms produced 2.5 to 4.5 inches of rain in about two hours over mainly the northern half of the county. Street flooding stranded cars in Sun Prairie, various locations in the city of Madison, Oregon, Middleton and DeForest. Three to four feet of water covered the intersection of Commercial Avenue and Ckronke Road in Sun Prairie, stalling cars and filling some home basements and commercial buildings with water, damaging their contents. | | | | |
| MILWAUKEE COUNTY --- 0.8 NW GRANVILLE [43.19, -88.06], 1.6 NNW FOX PT [43.19, -87.90], 2.5 E RAWSON [42.85, -87.83], 1.0 SE FRANKLIN [42.86, -88.07] | | | | |
| | 07/22/10 17:00 CST | 1 | 24.10M | Flash Flood (due to Heavy Rain) |
| | 07/22/10 23:00 CST | | 10K | Source: Emergency Manager |

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|---|-----------|-------------------|---------------------|------------------------|
| Thunderstorms training over the region produced flooding rains over all of Milwaukee County...causing massive flooding, shutting down streets and the freeway system at rush hour with up to 4 feet of rushing water. | | | | |
| There was one fatality - the body of a 19-year-old male was found in Lincoln Creek near N. 32nd St. and W. Hampton Ave. in Milwaukee. He was swept from his vehicle when Lincoln Creek flooded. | | | | |
| County Executive Scott Walker issued a Declaration of a Major Disaster for Milwaukee County since more than 7 inches of rain fell around the county, and an estimated \$24.1 million in damage in the private sector, and nearly \$11.6 million in public sector costs, which includes protective measures and clean-up costs. | | | | |
| The private sector damage costs include: \$22,396,790 dollars to residential buildings and \$1,686,752 dollars to businesses. The public sector costs include: \$2,003,010 dollars of damage to public buildings and equipment; \$2,385,760 dollars of damage to public utility systems; \$2,774,400 dollars or damage to road systems; \$310,000 dollars of damage to water control facilities and another \$1,326,100 dollars in damage to other public property for a total of \$8,799,270. In addition, another \$1,946,100 dollars were spent in debris clearance and \$894,988 dollars were spent for overtime. These costs are not directly related to the flood damage. | | | | |
| The Milwaukee Fire Department logged 50 rescues from homes and streets. | | | | |
| The Milwaukee Metropolitan Sewerage District (MMSD) reported that the storm resulted in a combined sewer overflow of around 2 billion gallons. All Lake Michigan beaches in Milwaukee were closed through the following weekend of July 24th and 25th due to sewer contamination. The City of Milwaukee received at least 2000 calls for sewer backups into basements of homes. It appeared that the northern half of the city of Milwaukee was hardest hit. | | | | |
| The flooding rains created a massive sink hole 20 feet deep and some 20 to 40 feet wide at the intersection of Oakland and North in the city of Milwaukee around 830 pm. It swallowed a Sport Utility Vehicle and a street light. The driver of the SUV was injured and treated at a hospital. Electrical power cables and other cable lines were damaged by the sink hole. | | | | |
| Milwaukee Mitchell International Airport was closed late Thursday night (July 22nd) through 2 pm Friday (July 23rd) due to flooded runways. One runway was opened at 2 pm Friday, however there were additional delays. | | | | |
| In Milwaukee County, over 4,400 homes reported water-filled basements in the city of Milwaukee alone. | | | | |
| 11,764 homes received some sort of impact from the flooding, with 6 homes destroyed; 57 homes receiving major damage; 1,859 home receiving minor damage; and an additional 9,842 homes minimally affected by the flood waters. Sixty-eight businesses were affected, with 9 having major damage and 59 having minor damage. | | | | |
| The north side of the city received the heaviest downpours with 7 to 8 inches of rain falling in 2 to 3 hours. WTMJ-TV4 on Milwaukee's northeast side measured 6.73 inches of rain in 1 hour, between 5:15 pm and 6:15 pm. The twenty-four hour rainfall (midnight to midnight July 22nd) was 8.31 inches. They also received another inch of rain after midnight on July 23rd, so the two-day total was 9.31 inches. | | | | |
| The Milwaukee Fire Department logged 50 rescues from homes and streets. | | | | |
| Nicolet High School in the north suburban community of Glendale had a completely flooded basement and 16" of water on the main floor. | | | | |
| Hourly rainfall amounts of 2 to 4 inches were reported, and WTMJ TV-4 on Milwaukee's northeast side measured 7 inches of rain in about 2.5 hours ending at 745 pm Thursday evening. The one-hour rainfall was 6.73 inches between 5:15 PM and 6:15 PM CDT in the late afternoon/evening. The twenty-four hour rainfall (midnight to midnight July 22nd) was 8.31 inches, with another inch after midnight on July 23rd, so the two day total was 9.31 inches. | | | | |
| Mitchell Field recorded 5.61 inches for the day, breaking a record for the date. The previous record was 1.26 set in 1948. This also is the second highest daily rainfall total on record for Milwaukee. The greatest one-day precipitation record was the 6.81 inches which fell on August 6, 1986. | | | | |
| Direct Fatalities: M19VE | | | | |

OZAUKEE COUNTY --- 1.8 SSW FIVE CORNERS [43.30, -88.02], 2.3 ESE GRAFTON [43.30, -87.91], 2.0 SW BAYSIDE [43.20, -87.91], 2.0 SSE MEQUON [43.19, -87.96]

| | | |
|--------------------|-----|---------------------------------|
| 07/22/10 17:00 CST | 20K | Flash Flood (due to Heavy Rain) |
| 07/22/10 19:00 CST | 1K | Source: Law Enforcement |

Police reported runoff from heavy rains caused a few sewer backups in homes causing damage to contents in Mequon. Police also reported water over roads in Cedarburg, draining with enough force to pop off a manhole cover near the high school. Law enforcement also closed I-43 at both Mequon Road and County Line Road, mainly due to impassable conditions due to flooding just over the county line in Milwaukee. Thiensville officials reported 2.85 inches of rain in less than 2 hours, while Mequon received 2.84 inches.

JEFFERSON COUNTY --- WATERTOWN [43.20, -88.72], 0.6 N IXONIA [43.16, -88.60], 1.9 NNE WHITEWATER [42.86, -88.72], 1.9 NNE BUSSEYVILLE [42.92, -88.97], 1.9 NNE WATERLOO [43.20, -88.97]

Storm Data and Unusual Weather Phenomena - July 2010

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|--------------------|-------------------|---------------------|---------------------------------|
| | 07/22/10 18:00 CST | | 0.15M | Flash Flood (due to Heavy Rain) |
| | 07/22/10 20:00 CST | | 10K | Source: Newspaper |

Training thunderstorms produced 3 to 5 inches of rain in two hours or less across mainly the northern two-thirds of the county. Many roads were rendered impassable for a time due to the heavy downpours. Localized flooding of roads and some basements, with damage to contents, were reported by the county emergency manager in Waterloo, Watertown, Lake Mills, Jefferson, Ixonia and Johnson Creek. STH 19 was closed east of Watertown due to high water over the road. Some storm total rainfall reports include 5.45 inches at Palmyra; 4.97 inches in Milford; 4.70 inches at the National Weather Service office in Sullivan; and 4.59 inches in Waterloo.

RACINE COUNTY --- 1.9 E HONEY LAKE [42.73, -88.28], 1.4 SE CALDWELL [42.81, -88.25], CALEDONIA [42.80, -87.93], 0.7 SSW FRANKSVILLE [42.74, -87.92]

| | | |
|--------------------|-----|---------------------------------|
| 07/22/10 18:00 CST | 20K | Flash Flood (due to Heavy Rain) |
| 07/22/10 20:00 CST | 1K | Source: Trained Spotter |

The southern edge of a line of training thunderstorms pushed across northern portions of Racine County, producing between 3 and 4 inches of rain in two hours or less. water covering area roads made them impassable, including CTH G at I-94, with the flood waters washing out gravel shoulders. Basements flooded, causing damage to contents, including the basement of a home on Spring Street on the northwest side of the city of Racine, flooded with water from the swollen Root River.

WAUKESHA COUNTY --- 0.7 NNE MENOMONEE FALLS [43.19, -88.10], 1.6 SSW DURHAM [42.85, -88.09], 3.6 W EAGLE [42.88, -88.54], 1.6 WNW LAC LA BELLE [43.16, -88.55]

| | | |
|--------------------|-------|---------------------------------|
| 07/22/10 18:00 CST | 2.90M | Flash Flood (due to Heavy Rain) |
| 07/22/10 20:00 CST | 50K | Source: Emergency Manager |

Thunderstorms training over the region produced 4 to 7 inches of rain over Waukesha County. While many sections of the county experienced flash flooding, the north and northeast sections were hardest hit, with numerous roads flooded and basements flooded in Brookfield, Menomonee Falls and Sussex. A trained spotter reported 4 inches of rain in one hour in Menomonee Falls where the heavy rains caused a sink hole to form on Campbell Drive. Rushing water flooded roads in Delafield near U.S. Highway 18, closed STH 59 at STH 164 south of Waukesha, and covered sections of CTH Z, west of Eagle in western Waukesha County. Flooded roads were also reported in Muskego, New Berlin and Oconomowoc.

Parts of south-central and southeast Wisconsin experienced several rounds of record-setting torrential heavy rains during the afternoon and evening hours of July 22, 2010 that led to flash flooding and damage. During the afternoon, a persistent band of strong to severe thunderstorms developed and moved very slowly over south central and southeast Wisconsin through the evening hours. The individual storms were moving quite fast, about 40 to 50 mph, but the slow southward movement of the boundary these storms were developing along, resulted in storms repeatedly training, or moving, over the same area.

Widespread 3 to 4 inch amounts were reported along and either side of the I-94 corridor, with locally higher amounts of 5 to 8 inches. The greatest rain amounts fell in Milwaukee County. Mitchell Field recorded 5.61 inches for the day, breaking a record for the date. The previous record was 1.26 set in 1948. This also is the second highest daily rainfall total on record for Milwaukee. The greatest one-day precipitation record was the 6.81 inches which fell on August 6, 1986. Madison also set a record for precipitation for the date at 3.62 inches. This beat the previous mark of 2.21 inches set in 1885. The 3.62 inches of rainfall ranks 13th for the most precipitation received in one day. The record is the 4.96 inches which fell on August 8, 1906.

About 32,000 We Energy utility customers lost electrical power throughout southeast Wisconsin due to the flooding and lightning.